

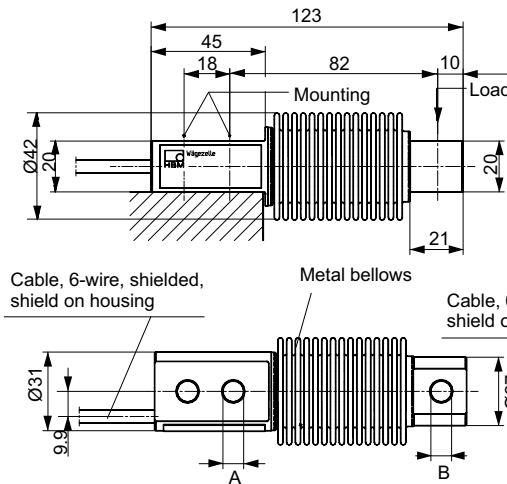
Special features

- Welded-on metal bellows
- Maximum capacities: 5 kg ... 1 t
- Load cells and mounting aids made of rust-resistant materials
- Legal for trade up to 6000 parts, test report to OIML R60
- Six-wire configuration
- Optimized for parallel connection
- Meets EMC requirements in accordance with DIN EN 45501:2015
- Options:
Explosion protection to ATEX and IECEx, FM (US) and EAC

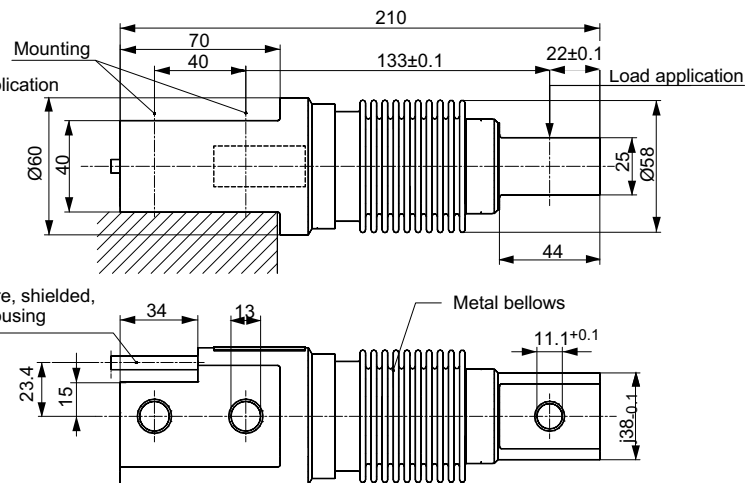


Dimensions (in mm; 1 mm = 0.03937 inches)

Z6F; Maximum capacities 5 kg...500 kg



Z6; Maximum capacity 500 kg (G), 1 t (F)



	A	B
5...200 kg	8.2	8.2
500 kg	10.5	11.1

Cable Ø5.4; 3 m long (standard version)

Specifications

Type		Z6(F/G)D1	Z6(F/G)C3	Z6FC4	Z6FC6
Accuracy class to OIML R 60		D1	C3	C4	C6
Number of load cell verification intervals (n_{LC})		1000	3000	4000	6000
Maximum capacity (E_{max})	kg	5; 10; 20; 30; 50; 100; 200; 500	10; 20; 30; 50; 100; 200; 500	20; 30; 50; 100; 200; 500	20; 30; 50; 100; 200
	t	1	1	-	-
Minimum load cell verification interval (v_{min})	% of E_{max}	0.036	0.009 0.0083 (30 kg)	0.0066	0.0066
Y value		2778	11111 12000 (30 kg)	15000	15000
Accuracy class to NTEP IIIM¹⁾					
Number of load cell verification intervals (n_{LC})			5000		
Maximum capacity (E_{max})	kg		20; 30; 50; 100; 200		
Minimum load cell verification interval (v_{min})	% of E_{max}		$E_{max}/11111$ $E_{max}/12000$ (30 kg)		
General specifications					
Nominal (rated) output (C_n)	mV/V	2			
Rated output tolerance with load appl. in stated direction	%	+(1;-0.1)	$\pm 0.05^2)$		
Temperature coefficient of rated output (TK_C) ³⁾	% of $C_n/10$ K	± 0.0500	± 0.0080	± 0.0070	± 0.0040
Temperature coefficient of zero signal (TC_0)		± 0.0500	± 0.0125 ± 0.0116 (30 kg)	± 0.0093	± 0.0093
Relative reversibility error (d_{hy}) ³⁾		± 0.0500	± 0.0170	± 0.0130	± 0.0080
Non-linearity (d_{lin}) ³⁾	% of C_n	± 0.0500	± 0.0180	± 0.0150	± 0.0110
Creep upon loading (d_{DR}) in 30 min.		± 0.0490	± 0.0166	± 0.0125	± 0.0083
Input resistance (R_{LC})	Ω	350...480			
Output resistance (R_0)		356 ± 0.2	356 ± 0.12		
Reference voltage (U_{ref})	V	5			
Nominal (rated) range of the excitation voltage (B_u)		0.5...12			
Insulation resistance (R_{is})		> 5			
Nominal (rated) range of the ambient temperature (B_T)	$^{\circ}C$	-10...+40			
Operating temperature range (B_{tu})		-30...+70			
Storage temperature range (B_{tl})		-50...+85			
Limit load (E_L)	% of E_{max}	150			
Breaking load (E_d)		≥ 300			

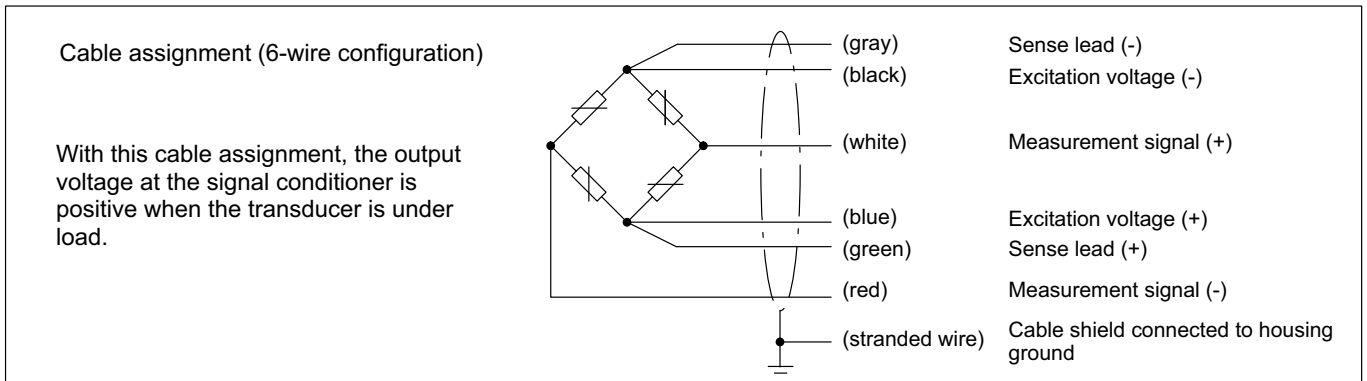
1) Load cells of OIML accuracy class C3 also conform to accuracy class NTEP (USA) IIIM 5000 with maximum capacities 20 to 200 kg. They therefore have a second NTEP label.

2) For load cell Z6FC3/10kg: $\leq \pm 0.1$ %.

3) The values for non-linearity, relative reversibility error and temperature response of the output range are recommended values. If these values are added together, the total is within the accumulated error limit to OIML R60.

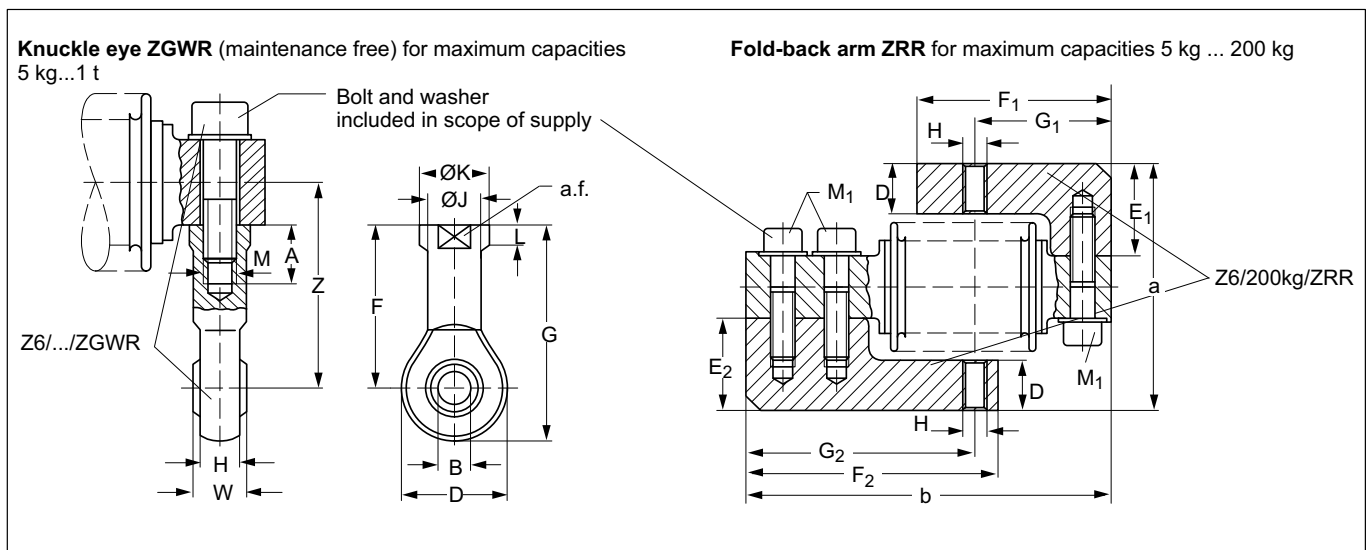
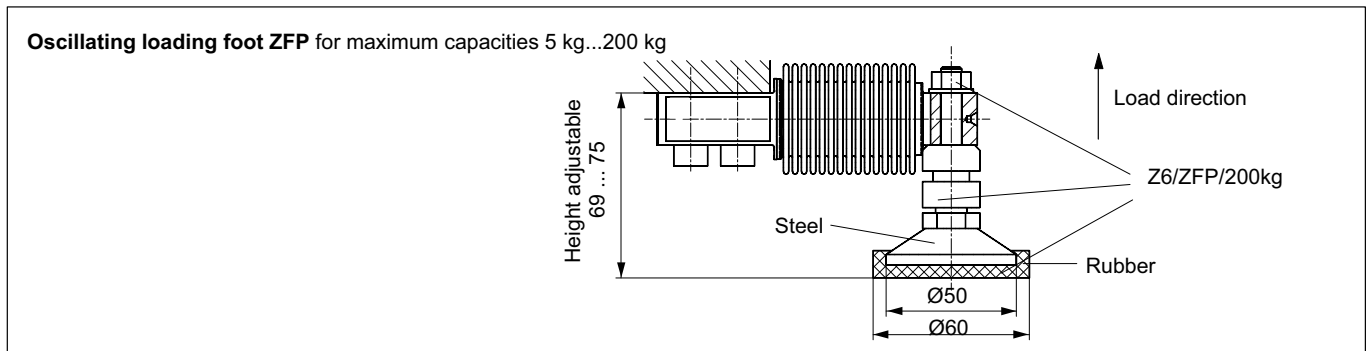
Maximum capacity	kg	5	10	20	30	50	100	200	500	1000
Permissible oscillation stress	% of E_{max}	100	100	100	100	100	100	100	70	100
Nominal (rated) displacement (s_{nom}) approx.	mm	0.24	0.3	0.29	0.28	0.27	0.31	0.39	0.6	0.55
Weight, (G) approx.	kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.3
Degree of protection (IP) to EN60529 (IEC529)		IP 68 (tougher test conditions: 1 m water column;100 h)								
Material		Stainless steel ⁴⁾								
Measuring body		Stainless steel ⁴⁾								
Bellows		Stainless steel/Viton®								
Cable entry		PVC								
Cable sheath										

4) To EN 10088-1



Mounting aids, not included in scope of supply (dimensions in mm)

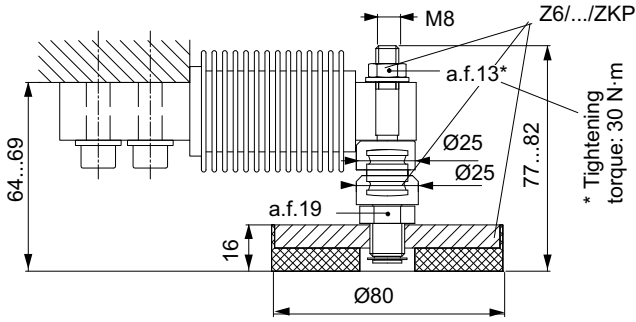
Notice: All mounting aids are made of rust-resistant material. The rubber parts of the ZEL are made of chloroprene rubber.



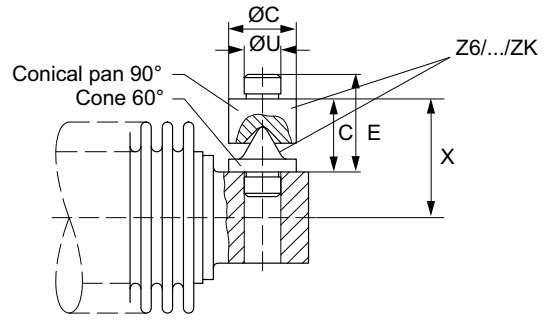
Maximum capacity	ZGWR	A	B	D	F	G	H	Ø J	Ø K	L	M	a.f.	W	Z
5...200 kg	Z6/200kg/ZGWR	16	8 ^{H7}	24	36	48	9	12.5	16	5	M8	14	12	46
500 kg	Z6/1t/ZGWR	20	10 ^{H7}	28	43	57	10.5	15	19	6.5	M10	17	14	53
1 t	Z6/1t/ZGWR	20	10 ^{H7}	28	43	57	10.5	15	19	6.5	M10	17	14	55.5

Maximum capacity	ZRR	D	E ₁	E ₂	F ₁	F ₂	G ₁	G ₂	H	M ₁	a	b	Depth
5...200 kg	Z6/200kg/ZRR	16	30	30	65	85	46	77	M8	M8x30	80 ± 1.1	123	15

Oscillating loading foot ZKP for maximum capacities 5 kg...200 kg

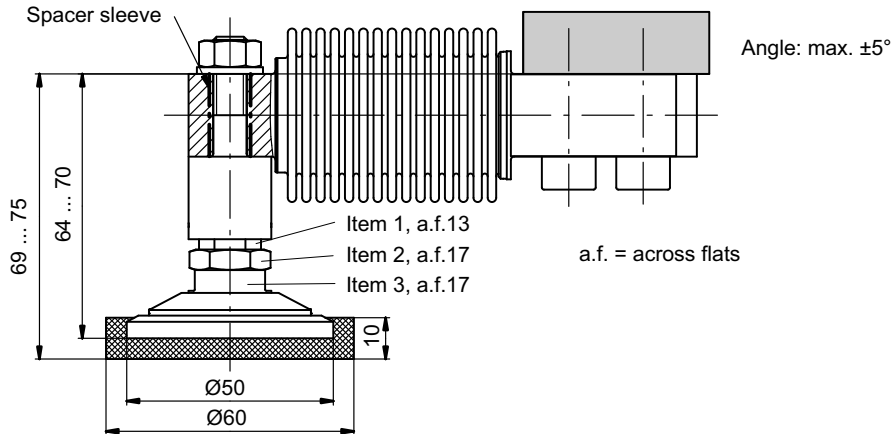


Cone, conical pan ZK for maximum capacities 5 kg...1 t



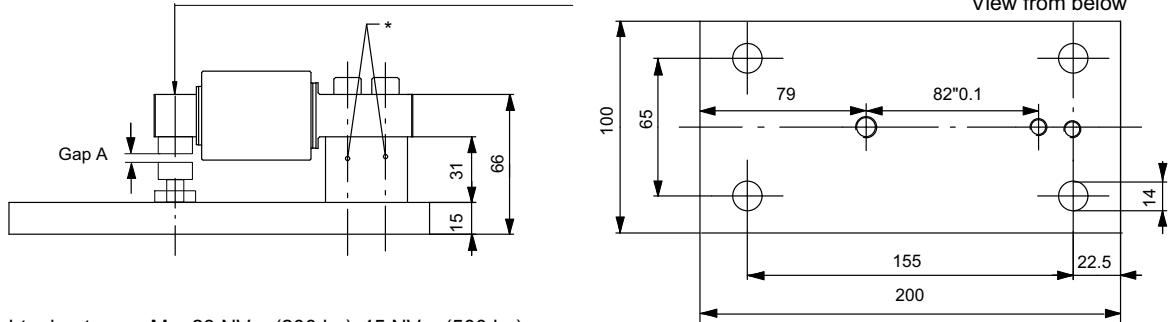
Maximum capacity	Cone, conical pan ZK	Ø C	D	E	Ø U	X
5...200 kg	Z6/200kg/ZK	15	16	21	8.1 _{-0.05}	26
500 kg	Z6/1t/ZK	18	24	32	11 _{-0.05}	34
1 t	Z6/1t/ZK	18	24	32	11 _{-0.05}	36.5

Oscillating loading foot PCX for maximum capacities 5 kg... 500 kg (Z6/PCX/500kg); 1 set comprising 4 pieces Z6/PCX/500kg



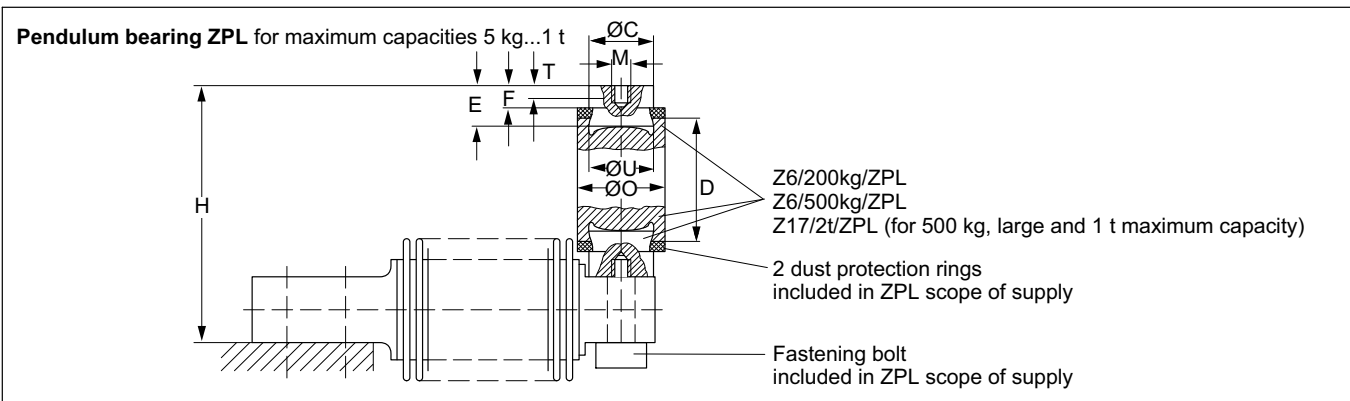
Mounting base/mounting kit for maximum capacities 5 kg (Z6/ZPU/200kg) ... 500 kg (Z6/ZPU/500kg)

Load application (Z6/...kg/ZPL; Z6/...kg/ZEL; Z6/...kg/ZK)



* Tightening torque M_A : 23 NVm (200 kg); 45 NVm (500 kg)

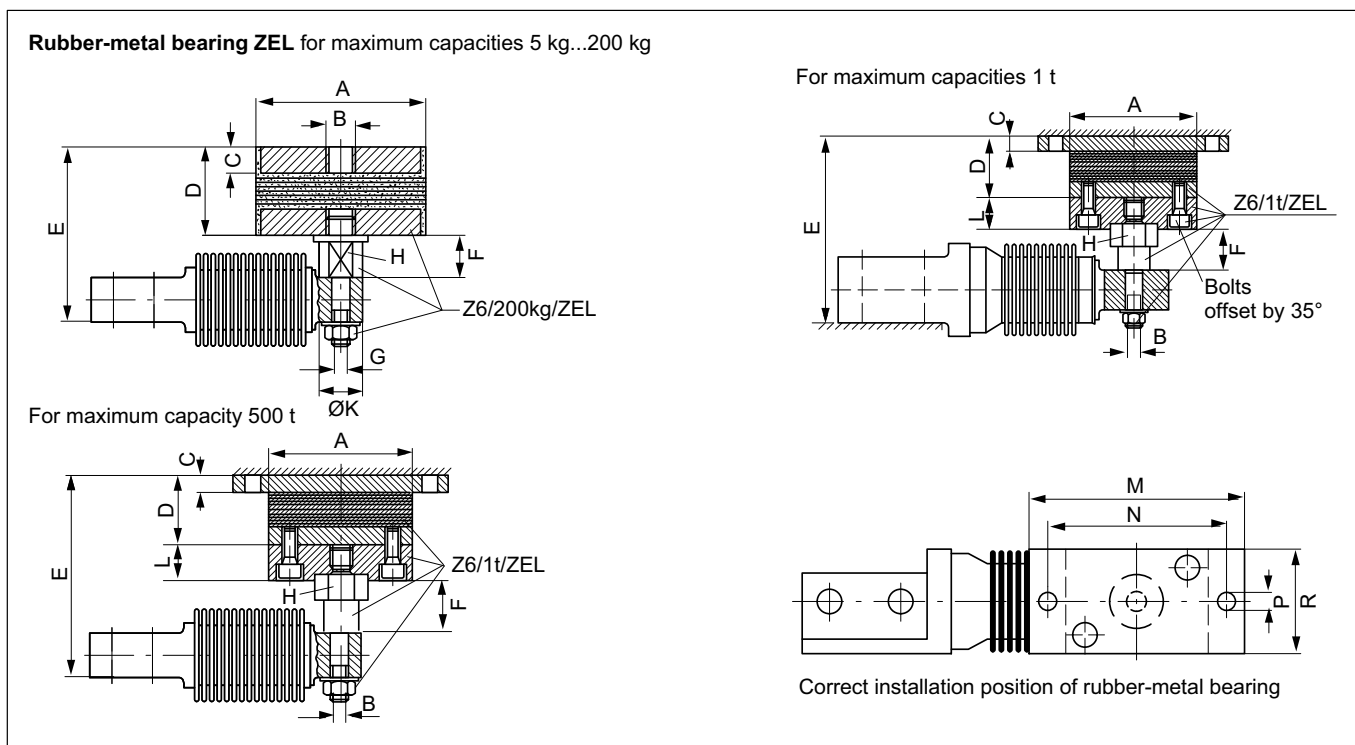
Gap A: In a load cell at maximum capacity, there should be a gap width of 0.05 mm



Maximum capacity	Pendulum bearing ZPL	Ø C	D	H	M	ØO	T	E	F	ØU	F _R ¹⁾ (% of load)	s _{max} ²⁾ (mm)
5...200 kg	Z6/200kg/ZPL	20 _{-0.2}	45	89 ^{+0.6} _{-0.8}	M8	30	6.5	17	9	20 ^{D10}	2.8	3.5
500 kg	Z6/500kg/ZPL	20 _{-0.2}	45	89 ^{+0.6} _{-0.8}	M8	30	6.5	17	9	20 ^{D10}	2.8	3.5
1 t	Z17/2t/ZPL	30 _{-0.1}	60	126.5	M10	46	8	22	14	30 ^{D10}	2	7.5

1) F_R: Restoring force in N, with 1 mm lateral displacement

2) s_{max}: Max. permissible lateral displacement at maximum capacity



Maximum capacity	ZEL	A	B	C	D	E	F	G	H	K	L	M	N	P	R	F _R ¹⁾	s _{max} ²⁾
5...200 kg	Z6/200kg/ZEL	75	M12	12	40	79 ± 1.3	18.5	M8	a.f.17	19	-	-	-	-	-	163	3
500 kg	Z6/1t/ZEL	80	M10	10	39	105 ^{+2.1} _{-2.2}	26	-	a.f.27	-	20	120	100	9	60	400	4.5
1 t	Z6/1t/ZEL	80	M10	10	39	117 ^{+2.1} _{-2.2}	26	-	a.f.27	-	20	120	100	9	60	400	4.5

1) F_R: Restoring force in N, with 1 mm lateral displacement

2) s_{max}: in mm, max. permissible lateral displacement at maximum capacity

Ordering numbers

Type	Z6			
Accuracy class	D1 (OIML)	C3 (OIML)	C4 (OIML)	C6 (OIML)
Maximum capacity	Ordering number			
5 kg	1-Z6FD1/5KG-1			
10 kg	1-Z6FD1/10KG-1	1-Z6FC3/10KG-1		
20 kg	1-Z6FD1/20KG-1	1-Z6FC3/20KG-1	1-Z6FC4/20KG-1	1-Z6FC6/20KG-1
30 kg	1-Z6FD1/30KG-1	1-Z6FC3/30KG-1	1-Z6FC4/30KG-1	1-Z6FC6/30KG-1
50 kg	1-Z6FD1/50KG-1	1-Z6FC3/50KG-1	1-Z6FC4/50KG-1	1-Z6FC6/50KG-1
100 kg	1-Z6FD1/100KG-1	1-Z6FC3/100KG-1	1-Z6FC4/100KG-1	1-Z6FC6/100KG-1
200 kg	1-Z6FD1/200KG-1	1-Z6FC3/200KG-1	1-Z6FC4/200KG-1	1-Z6FC6/200KG-1
500 kg	1-Z6FD1/500KG-1	1-Z6FC3/500KG-1 1-Z6GC3/500KG/1 ¹⁾	1-Z6FC4/500KG-1	
1 t	1-Z6FD1/1T	1-Z6FC3/1T		

1) Type Z6G with large measuring body, just as 1t version

Cable lengths: 3 m standard cable for all maximum capacities

Z6 load cells, optional versions

Ordering number	
K-Z6	
Code	Option 1: Design
F	Z6F
G	Z6G (large) [only with option 2 = C3 + option 3 = 500]
Code	Option 2: Accuracy class
D1	D1 (OIML) [not with option 1 = G]
C3	C3 (OIML)
C4	C4 (OIML) [only with option 3 = 20 / 30 / 50 / 100 / 200 / 500 + option 5 = S3]
C6	C6 (OIML) [only with option 3 = 20 / 30 / 50 / 100 / 200 / 500 + option 5 = S3]
Code	Option 3: Maximum capacity
5	5 kg [only with option 2 = D1]
10	10 kg [only with option 2 = D1 / C3]
20	20 kg
30	30 kg [only with option 4 = N/(AI2/21)]
50	50 kg
100	100 kg
200	200 kg
500	500 kg [only with option 2 = D1 / C3 / C4]
1000	1 t [only with option 2 = D1 / C3]
Code	Option 4: Explosion protection
N	No explosion protection
AI1/21	IECEX ATEX Zone 1/21 and FM
AI2/21	IECEX ATEX Zone 2/21
R1/21	EAC Zone 1/21
R2/21	EAC Zone 2/21
Code	Option 5: Cable length
S3	3 m (standard)
6	6 m [not with option 2 = C6]
12	12 m [not with option 2 = C6]
Code	Option 6: Other
N	Without
AU	With Australian type label NMIA no. S497 [not with option 3 = 30] [not with option 2 = C6 + option 3 = 20]

K-Z6 - [] - [] - [] - [] - [] - [] - [] - [] - [] - []

Options

Explosion protection versions to IECEx, ATEX and FM (USA)

AI1/21 IECEx+ATEX Zone 1/21 + FM intrinsically safe, II 2G Ex ia IIC T6/T4 Gb, II 2D Ex ia IIIC T125°C Db*

AI2/21** IECEx+ATEX Zone 2/21 not intrinsically safe, II 3G Ex ec IIC T6/T4 Gc, II 2D Ex tb IIIC T125°C Db*

* With EU type examination certificate (BVS13ATEX E 108 X) and IECEx Certificate of Conformity (IECEx BVS 13.0109 X)

** Option AI2/21 IEC + ATEX zone 2/21 includes zone 2/22

Explosion protection versions to EAC (Eurasian Economic Union, with the member states: Russia, Belarus, Armenia, Kazakhstan, Kyrgyzstan)

R1/21 EAC Zone 1/21 TR ZU 012/2011 Ex certificate, 1 Ex ia IIC T6/T4 Gb X / Ex ia IIIC T125°C Db X***

R2/21 EAC Zone 2/21 TR ZU 012/2011 Ex certificate, 2 Ex nA IIC T6/T4 Gc X / Ex tb IIIC T125°C Db X***

*** With certificate "СЕРТИФИКАТ СООТВЕТСТВИЯ № ТС RU С-ДЕ.ГБ08.В.01138"

Subject to modifications.

All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.

Hottinger Baldwin Messtechnik GmbH
Im Tiefen See 45 · 64293 Darmstadt · Germany
Tel. +49 6151 803-0 · Fax +49 6151 803-9100
E-mail: info@hbm.com · www.hbm.com

measure and predict with confidence

